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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,215	02/13/2004	Johannes Denteler	080437.53195US	2493
23911	7590	02/10/2005	EXAMINER	
CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			CORRIGAN, JAIME W	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/777,215

Applicant(s)

DENTELER ET AL.

Examiner

Jaime W Corrigan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,9,11,14-18,25 and 28 is/are rejected.
- 7) ☒ Claim(s) 5-8,10,12,13,19-24,26 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>13 February 2004</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 9, 11, 14-18, 25, 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Wright et al. (PN 5,873,335).

Regarding claims 1, 15 Wright discloses a rotary actor device for stroke control of a charge-change poppet valve in the cylinder head of an internal combustion engine, comprising a characteristic-controlled rocker motor (See Figure 2 (18)) as a rotary actor with a rotor operated alternately between terminal rotary abutments (See Figure 2 (24), (38)), which serves through a shaft with a control disk (See Figure 2 (16)) fixed thereon for rotation, with a section-wise cam profile (See Figure 2 (14)) of the stroke control of the poppet valve (See Figure 2 (34)) urged by a closing spring (See Figure 2 (22)), the poppet valve furthermore being forced in the opening direction by means of a spring (See Figure 2 (26)) positioned in/on the cylinder head by a spring arm acting with bias on a lever (See Figure 2 (Lever connected to (18)) affixed to a shaft, and furthermore the spring serves for the secure contact with abutments affixed to the shaft against the end rotation abutments (See Figure 2 (24), (38)) associated with the closed position or open position of the poppet valve by means of the spring arm acting on the

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lever affixed to the shaft, with such reduced force that on the one hand the secured starting position up to a predetermined rocking frequency of the shaft or rotor by means of the rocking motor is overcome at relatively low (See Column 2 Lines 28-67) energy input, and on the other hand, beyond the predetermined rocking frequency the starting position secured in each case is overcome by means of a ricochet (See Column 2 Lines 28-67, Column 4 Lines 45-60) movement produced by a resilient deformation of one of the colliding corresponding abutments, then an additional reduced (See Column 2 Lines 28-67, Column 4 Lines 45-60) energy input is achieved by means of the rotor of the rocking motor which is chosen to be relatively large corresponding to the energy exchange of the closing spring and poppet valve.

Regarding claims 2, 16 Wright discloses the rocker motor is supplied with electrical (See Column 2 Lines 28-32) or pneumatic or hydraulic energy.

Regarding claims 3, 17 Wright discloses the ricochet movement of corresponding abutments (See Figure 2 (24), (38)) is achieved by means of harder abutting surfaces or by means of a stiff resilient abutment.

Regarding claims 4, 18 Wright discloses the control disk comprises a half-cam (See Figure 2 (14)) profile which has a cam flank configured with a ramp between a cam break-over point and a basic circuit for opening and closing, to which the control disk (See Figure 2 (16)) has in a diametrical area a basic circular section which is

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adjoined by an abutment directed substantially radially to the cam break-over area for the end rotary abutment (See Figure 2 (24)) disposed at the motor or cylinder head side.

Regarding claim 9 Wright discloses the end section of the spring arm (See Figure 2 (Lever connected to (18))) of the spring bears at its free end a resilient abutment hook as a second end rotary abutment limiting the opening stroke of the poppet valve (See Figure 2 (34)) in cooperation with the roller, and wherein the control disk (See Figure 2 (16)) has in the corresponding cam break-over point in some cases an arc coaxial with the shaft.

Regarding claims 11, 25 Wright discloses the control disk (See Figure 2 (16)) cooperates with an intermediate knuckle arm and wherein the intermediate knuckle arm is disposed supported against the cylinder head (See Figure 2 (32)) through a hydraulic valve play compensating element (See Figure 2 (22))).

Regarding claims 14, 28 Wright discloses a toggle lever (See Figure 2 (Lever connected to (18))) and/or hydraulic valve lifter serves as an additional transfer element and in some cases combined with a hydraulic valve play equalization element (See Figure 2 (22)).

***Allowable Subject Matter***

Claims 5-8, 10, 12-13, 19-24, 26-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Meneely et al. (PN 6,314,926), Imura (PN 5,905,917) disclose similar valve actuator devices.

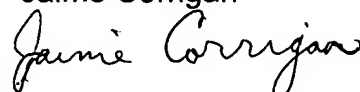
Any inquiry concerning this communication from the examiner should be directed to Examiner Jaime Corrigan whose Carlyle telephone number is (571) 272-4858. The examiner can normally be reached on Monday - Friday from 8:30 a.m. – 6:00 p.m. 2<sup>nd</sup> Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (571) –272-4859. The fax number for this group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-3700.

JC

Jaime Corrigan

A handwritten signature in black ink that reads "Jaime Corrigan". The signature is written in a cursive, flowing style.

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Patent Examiner

February 07, 2005

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A handwritten signature in black ink, appearing to read "Ths Den", with a stylized flourish at the end.

THOMAS DENION  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700